

REMARKS

This Amendment is filed in response to the non-final Office action mailed March 5, 2004. All objections and rejections are respectfully traversed. Reconsideration of the application, as amended, is respectfully requested.

Claims 1 and 4-78 are pending in the case.

The Applicants have canceled claims 2 and 3 without prejudice.

The Applicants have amended claims 1, 4-15, 17-21, 23 and 25 to better claim the invention.

The Applicants have added new claims 26-78. Support for new claims 26-78 may be found, among other places, at page 5, lines 16-18 in the specification. Support for the new claims 28-29 may be found, for example, at reference block 409 of Fig. 4A and its corresponding description at the top of page 16 in the specification. Claims 30-31 are supported by the relevant description at, *inter alia*, page 11, lines 13-27 in the specification. New claim 32 comprises the same or similar subject matter as original claim 2, and new claims 33-78 comprise the same or similar subject matter as Applicants' claim 1. Accordingly, no new matter is being added.

At pages 2-3 in the Office action, claims 3, 13, 17, 21, 23 and 25 were objected to for containing various informalities. Applicants respectfully submit that because claim 3 has been canceled, the objection to claim 3 is now moot. In addition, the Examiner's suggested changes to claims 13, 17, 21, 23 and 25 have been incorporated into the pending claims, thereby obviating their claim objections.

At pages 3-4 in the Office action, claims 2, 4, 6 and 14 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention.

In response, claims 4 and 14 have been amended to correct the noted antecedent problems. Claim 6 has been amended to explicitly recite that the "first processor" previously recited in claim 1 is mounted on the linecard. Further, claim 2 has been canceled. Thus, Applicants respectfully submit that the 35 U.S.C. § 112, second paragraph rejections should be removed.

At pages 4-17 in the Office action, claims 1, 6-13 and 18-25 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,188,674 to Chen et al. (hereinafter "Chen '674") in view of U.S. Patent No. 5,793,976 to Chen et al. (hereinafter "Chen '976").

The present invention, as set forth in representative independent claim 1, as amended, comprises in part:

A router controlling congestion on links attached to the router, said router comprising:

a plurality of ports;

a first port of said plurality of ports for receiving a data packet;

a second port of said plurality of ports for transmitting said data packet;

a receiver to receive an incoming loss report message on said second port;

a first processor to determine loss of packets on selected ports of said plurality of ports;

a second processor to calculate, in response to said incoming loss report message and said loss of packets, a loss rate statistic;

a transmitter to transmit an outgoing loss report message through said first port, said outgoing loss report message containing a field having said loss rate statistic written therein.

Briefly, the Applicants' claimed router forwards **data** in a "downstream" direction, where a data packet is received at a first port and is transmitted over a second port. In contrast, the claimed router forwards **loss report messages** in an entirely opposite "upstream" direction. That is, an incoming loss report message is *received* at the second port which is used to *transmit* data, and an outgoing loss report message is *transmitted* over the first port which is used to *receive* data. In short, the Applicants' claim 1 explicitly recites opposing traffic flow directions for data and loss report messages.

Applicants respectfully submit that both Chen '674 and Chen '976 disclose transmitting management packets in the same direction as the data packets.

The Office action describes Chen '674 by acknowledging that:

Chen lacks "a receiver to receive an incoming loss report message... a second processor to calculate, in response to said loss report and said loss of packets, a loss rate statistic... a transmitter to transmit an outgoing loss report message through said first port, said outgoing loss report message containing a field having said loss rate statistic written therein."

(Office action at page 5, lines 12-16)

In other words, Chen '674 fails to teach or suggest the Applicants' claimed incoming and outgoing loss report messages that are forwarded through a router in an upstream direction, i.e., in a direction opposing the flow of data.

The Applicants respectfully submit that Chen '976 does not remedy the noted deficiencies in Chen '674. More specifically, Chen '976 explicitly teaches a network in which "management packets follow the same path as the user [data] packets." See Chen '976 at Col. 5, lines 29-30. In fact, Chen discloses inserting the management packets directly into the user data stream so the management packets can be received at the endpoint of the data stream's virtual connection:

The packet loss count is recorded while the previous user data packet in the data stream is being sent to the output port, *allowing the loss management data packet to retain its place in the data stream.*

(Chen '976 at Col. 5, lines 63-67)

When the end-to-end loss accumulating management packet arrives at the virtual connection endpoint, the packet loss count field reflects the total number of discarded packets in the preceding block of user packets. (Chen '976 at Col. 5, lines 16-19)

As shown above, Chen '976 does not teach or suggest incoming and outgoing loss report messages that are respectively received and transmitted in an opposite direction as the flow of data, as recited in the Applicants' amended claim 1. Furthermore, as previously noted, the Office action acknowledges that Chen '674 also does not teach or suggest opposing flows of data and incoming and outgoing loss report messages as recited in Applicants' amended claim 1.

Accordingly, the Applicants respectfully urge that claim 1 is patentable over the cited art since neither Chen '674 nor Chen '976 teach or otherwise disclose the Applicants' claimed opposing traffic flows for data and loss report messages: ***a first port of said plurality of ports for receiving a data packet ... a second port of said plurality of ports for transmitting said data packet ... a receiver to receive an incoming loss report message on said second port ... to calculate, in response to said incoming loss report message and said loss of packets, a loss rate statistic ... a transmitter to transmit an outgoing loss report message through said first port.***

Particularly, neither Chen patent has any disclosure of Applicant's claimed novel ***to calculate, in response to said incoming loss report message and said loss of packets,***

a loss rate statistic. Further, neither Chen patent discloses *to calculate, in response to said incoming loss report message ... a loss rate statistic.* Still further, neither Chen patent discloses *to calculate, in response to said ... loss of packets, a loss rate statistic.*

Accordingly, Applicant respectfully urges that both Chen patents, taken either singly or in combination, are legally precluded from rendering obvious under 35 U.S.C. § 103 Applicant's claimed novel invention, because of the absence from each of Applicant's claimed: *a first port of said plurality of ports for receiving a data packet ... a second port of said plurality of ports for transmitting said data packet ... a receiver to receive an incoming loss report message on said second port ... to calculate, in response to said incoming loss report message and said loss of packets, a loss rate statistic ... a transmitter to transmit an outgoing loss report message through said first port.*

Because the independent claims 13, 23-25 and 32-78 comprise the same or similar patentable subject matter as Applicants' independent claim 1, the Applicants respectfully submit that the claims 13, 23-25 and 32-78 are allowable over the art of record for the same reasons.

At page 17 in the Office action, it is noted that claims 5 and 15 would be allowable if rewritten in independent form. In response, the claims 5 and 15 have been

amended to incorporate all the limitations of their respective base claims, and are therefore believed to be in condition for allowance as independent claims.


All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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